

ARTICULATING SUTURING DEVICE AND METHOD

~~ABSTRACT OF THE DISCLOSURE~~

Devices, systems, and methods for suturing of body lumens allow the suturing of vascular puncture sites located at the distal end of a percutaneous tissue tract.

An elongated articulated foot near a distal end of a shaft is inserted through the

5 penetration and actuated so that the foot extends along the luminal axis. The foot carries

suturing attachment cuffs, and needles are advanced from the shaft through the vessel wall outside of the penetration and into engagement with the needle cuffs after the foot has been drawn proximally up against the endothelial surface of the blood vessel. The

10 cross-section of the shaft within the tissue tract can be minimized by laterally deflecting

the needles as they leave the shaft, while tapered depressions within the foot can guide the advancing needles into engagement with the cuffs. The cuffs lockingly engage the

needles and can be withdrawn proximally along the needle paths and through the tissue tract so as to form a loop of suture across the puncture. The articulating foot may be

15 realigned with the shaft and withdrawn proximally through the tissue tract without dilating the tissue tract.